

REMARKS/ARGUMENTS

Claims 2, 5, 6, and 8 are rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5

Response:

Claims 2, 5, 6, and 8 have been amended to remove the phrase “and the like”. As such, the scope of these claims is now clearly defined, and is no longer unclear. Reconsideration of claims 2, 5, 6, and 8 is respectfully requested.

10

Claims 1-8 and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Lai (US 2004/0261693) in view of Ishibashi (US 5,923,950).

15

Response:

20

The applicant would like to point out the patentable features of independent claims 1 and 22. Claim 1 has been amended to recite the step of “forming a ternary nitride-based buffer layer by reacting the second group III element and the third reaction source with the first group III element on the substrate”. Claim 22 has been amended to recite the feature of “forming a ternary nitride-based buffer layer by reacting the second group III element and the third reaction source with the first group III element on the substrate”. These amendments are made to clarify the claim language and remove language that can be construed as stating intended use. No new matter has been added through the amendments to claims 1 and 22.

25

The examiner has stated that Lai does not appear to explicitly disclose “for forming a ternary nitride-based buffer layer with the first group III element on the substrate” or “to react with the first group III element on the substrate for forming a ternary nitride-based buffer layer”, and “the ternary nitride-based

30

buffer layer” is the intended use language “for forming a ternary nitride-based buffer layer”. Now, the intended use language has been amended to “forming a ternary nitride-based buffer layer by reacting the second group III element and the third reaction source with the first group III element on the substrate”. The 5 ternary nitride-based buffer layer has to be formed by reacting the second group III element and the third reaction source with the first group III element on the substrate. According to examiner’s statement, Lai disclosed introducing **the first reaction source** “trimethyl aluminum” comprising a first group III element at a first temperature “200 degree C. to 800 degree C.” **for forming a first buffer layer**, and then introducing **the second reaction source** “trimethyl gallium” comprising a second group III element and a third reaction source NH₃ comprising nitrogen at a second temperature “800 degree C. to 1100 degree C.” 10 **for forming a second buffer layer**. Lai never disclosed the formation of a ternary nitride-based buffer layer by reacting the second group III element and the third reaction source with the first group III element as recited in the amended 15 claim 1 and claim 22, and the amendments are not statements of intended use.

For the above reasons, the applicant submits that the combination of Lai and Ishibashi fails to teach all of the claimed limitations contained in claims 1 and 22. 20 Claims 2-8, 20, and 21 are dependent on claim 1, and should be allowed if claim 1 is allowed. Claims 23-25 are dependent on claim 22, and should be allowed if claim 22 is allowed. Reconsideration of claims 1-8 and 20-25 is therefore respectfully requested.

25 Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Appl. No. 10/711,567
Amdt. dated August 15, 2008
Reply to Office action of May 16, 2008

Sincerely yours,

Winston Hsu

Date: 08/15/2008

Winston Hsu, Patent Agent No. 41,526

5 P.O. BOX 506, Merrifield, VA 22116, U.S.A.

Voice Mail: 302-729-1562

Facsimile: 806-498-6673

e-mail : winstonhsu@naipo.com

10 Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan.)